SEQUENCE LISTING

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<130> 200512.00002

<140> PCT/IB05/050257
<141> 2005-01-21

<150> 60/537,860
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<170> PatentIn Ver. 3.3

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Trp Gly Asp Cys Gly Leu Pro Pro Asp Val Pro Asn Ala Gln Pro Ala
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Leu Glu Gly Arg Thr Ser Phe Pro Glu Asp Thr Val Ile Thr Tyr Lys
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Cys Glu Glu Ser Phe Val Lys Ile Pro Gly Glu Lys Asp Ser Val Ile
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Cys Leu Lys Gly Ser Gln Trp Ser Asp Ile Glu Glu Phe Cys Asn Arg
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Ser Cys Glu Val Pro Thr Arg Leu Asn Ser Ala Ser Leu Lys Gln Pro
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Tyr Ile Thr Gln Asn Tyr Phe Pro Val Gly Thr Val Val Glu Tyr Glu
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Cys Arg Pro Gly Tyr Arg Arg Glu Pro Ser Leu Ser Pro Lys Leu Thr
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Cys Pro Ala Pro Pro Gln Ile Asp Asn Gly Ile Ile Gln Gly Glu Arg
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Asp His Tyr Gly Tyr Arg Gln Ser Val Thr Tyr Ala Cys Asn Lys Gly
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Phe Thr Met Ile Gly Glu His Ser Ile Tyr Cys Thr Val Asn Asn Asp
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Glu Gly Glu Trp Ser Gly Pro Pro Pro Glu Cys Arg Gly Lys Ser Leu
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Thr Ser Lys Val Pro Pro Thr Val Gln Lys Pro Thr Thr Val Asn Val
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Pro Thr Thr Glu Val Ser Pro Thr Ser Gln Lys Thr Thr Thr Lys Thr
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Thr Thr Pro Asn Ala Gln Ala Thr Arg Ser Thr Pro Val Ser Arg Thr
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Thr Lys His Phe His Glu Thr Thr Pro Asn Lys Gly Ser Gly Thr Thr
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                35                  40                  45

Asn Ala Pro Glu Trp Leu Pro Phe Ala Arg Pro Thr Asn Leu Thr Asp
        50                  55                  60

Glu Phe Glu Phe Pro Ile Gly Thr Tyr Leu Asn Tyr Glu Cys Arg Pro
 65                  70                  75                  80

Gly Tyr Ser Gly Arg Pro Phe Ser Ile Ile Cys Leu Lys Asn Ser Val
                85                  90                  95

Trp Thr Gly Ala Lys Asp Arg Cys Arg Arg Lys Ser Cys Arg Asn Pro
                100                 105                 110

Pro Asp Pro Val Asn Gly Met Val His Val Ile Lys Gly Ile Gln Phe
                115                 120                 125

Gly Ser Gln Ile Lys Tyr Ser Cys Thr Lys Gly Tyr Arg Leu Ile Gly
        130                 135                 140
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Asn Glu Thr Pro Ile Cys Asp Arg Ile Pro Cys Gly Leu Pro Pro Thr
                165   170   175

Ile Thr Asn Gly Asp Phe Ile Ser Thr Asn Arg Glu Asn Phe His Tyr
            180   185   190

Gly Ser Val Val Thr Tyr Arg Cys Asn Pro Gly Ser Gly Gly Arg Lys
        195   200   205

Val Phe Glu Leu Val Gly Glu Pro Ser Ile Tyr Cys Thr Ser Asn Asp
    210   215   220

Asp Gln Val Gly Ile Trp Ser Gly Pro Ala Pro Gln Cys Ile Ile Pro
225   230   235   240

Asn Lys Cys Thr Pro Pro Asn Val Glu Asn Gly Ile Leu Val Ser Asp
            245   250   255

Asn Arg Ser Leu Phe Ser Leu Asn Glu Val Val Glu Phe Arg Cys Gln
            260   265   270

Pro Gly Phe Val Met Lys Gly Pro Arg Arg Val Lys Cys Gln Ala Leu
        275   280   285

Asn Lys Trp Glu Pro Glu Leu Pro Ser Cys Ser Arg Val Cys Gln Pro
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Pro Pro Asp Val Leu His Ala Glu Arg Thr Gln Arg Asp Lys Asp Asn
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Phe Ser Pro Gly Gln Glu Val Phe Tyr Ser Cys Glu Pro Gly Tyr Asp
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Leu Arg Gly Ala Ala Ser Met Arg Cys Thr Pro Gln Gly Asp Trp Ser
            340   345   350

Pro Ala Ala Pro Thr Cys Glu Val Lys Ser Cys Asp Asp Phe Met Gly
        355   360   365

Gln Leu Leu Asn Gly Arg Val Leu Phe Pro Val Asn Leu Gln Leu Gly
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Ala Lys Val Asp Phe Val Cys Asp Glu Gly Phe Gln Leu Lys Gly Ser
385   390   395   400

Ser Ala Ser Tyr Cys Val Leu Ala Gly Met Glu Ser Leu Trp Asn Ser
            405   410   415

Ser Val Pro Val Cys Glu Gln Ile Phe Cys Pro Ser Pro Pro Val Ile
            420   425   430

Pro Asn Gly Arg His Thr Gly Lys Pro Leu Glu Val Phe Pro Phe Gly
        435   440   445

Lys Ala Val Asn Tyr Thr Cys Asp Pro His Pro Asp Arg Gly Thr Ser
    450   455   460

Phe Asp Leu Ile Gly Glu Ser Thr Ile Arg Cys Thr Ser Asp Pro Gln
465   470   475   480

Gly Asn Gly Val Trp Ser Ser Pro Ala Pro Arg Cys Gly Ile Leu Gly
                485   490   495

His Cys Gln Ala Pro Asp His Phe Leu Phe Ala Lys Leu Lys Thr Gln
            500   505   510

Thr Asn Ala Ser Asp Phe Pro Ile Gly Thr Ser Leu Lys Tyr Glu Cys
            515   520   525

Arg Pro Glu Tyr Tyr Gly Arg Pro Phe Ser Ile Thr Cys Leu Asp Asn
    530   535   540

Leu Val Trp Ser Ser Pro Lys Asp Val Cys Lys Arg Lys Ser Cys Lys
545   550   555   560

Thr Pro Pro Asp Pro Val Asn Gly Met Val His Val Ile Thr Asp Ile
            565   570   575

Gln Val Gly Ser Arg Ile Asn Tyr Ser Cys Thr Thr Gly His Arg Leu
            580   585   590

Ile Gly His Ser Ser Ala Glu Cys Ile Leu Ser Gly Asn Ala Ala His
        595   600   605

Trp Ser Thr Lys Pro Pro Ile Cys Gln Arg Ile Pro Cys Gly Leu Pro
    610   615   620

Pro Thr Ile Ala Asn Gly Asp Phe Ile Ser Thr Asn Arg Glu Asn Phe
625   630   635   640

His Tyr Gly Ser Val Val Thr Tyr Arg Cys Asn Pro Gly Ser Gly Gly
            645   650   655

Arg Lys Val Phe Glu Leu Val Gly Glu Pro Ser Ile Tyr Cys Thr Ser
        660   665   670

Asn Asp Asp Gln Val Gly Ile Trp Ser Gly Pro Ala Pro Gln Cys Ile
        675   680   685

Ile Pro Asn Lys Cys Thr Pro Pro Asn Val Glu Asn Gly Ile Leu Val
    690   695   700

Ser Asp Asn Arg Ser Leu Phe Ser Leu Asn Glu Val Val Glu Phe Arg
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Cys Gln Pro Gly Phe Val Met Lys Gly Pro Arg Arg Val Lys Cys Gln
            725   730   735

Ala Leu Asn Lys Trp Glu Pro Glu Leu Pro Ser Cys Ser Arg Val Cys
            740   745   750

Gln Pro Pro Pro Asp Val Leu His Ala Glu Arg Thr Gln Arg Asp Lys
        755   760   765

Asp Asn Phe Ser Pro Gly Gln Glu Val Phe Tyr Ser Cys Glu Pro Gly
    770   775   780

Tyr Asp Leu Arg Gly Ala Ala Ser Met Arg Cys Thr Pro Gln Gly Asp
785   790   795   800

Trp Ser Pro Ala Ala Pro Thr Cys Glu Val Lys Ser Cys Asp Asp Phe
            805   810   815

Met Gly Gln Leu Leu Asn Gly Arg Val Leu Phe Pro Val Asn Leu Gln
            820   825   830

Leu Gly Ala Lys Val Asp Phe Val Cys Asp Glu Gly Phe Gln Leu Lys
        835   840   845

Gly Ser Ser Ala Ser Tyr Cys Val Leu Ala Gly Met Glu Ser Leu Trp
    850   855   860

Asn Ser Ser Val Pro Val Cys Glu Gln Ile Phe Cys Pro Ser Pro Pro
865   870   875   880

Val Ile Pro Asn Gly Arg His Thr Gly Lys Pro Leu Glu Val Phe Pro
            885   890   895

Phe Gly Lys Ala Val Asn Tyr Thr Cys Asp Pro His Pro Asp Arg Gly
            900   905   910

Thr Ser Phe Asp Leu Ile Gly Glu Ser Thr Ile Arg Cys Thr Ser Asp
        915   920   925

Pro Gln Gly Asn Gly Val Trp Ser Ser Pro Ala Pro Arg Cys Gly Ile
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Leu Gly His Cys Gln Ala Pro Asp His Phe Leu Phe Ala Lys Leu Lys
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Thr Gln Thr Asn Ala Ser Asp Phe Pro Ile Gly Thr Ser Leu Lys Tyr
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Glu Cys Arg Pro Glu Tyr Tyr Gly Arg Pro Phe Ser Ile Thr Cys Leu
        980   985   990

Asp Asn Leu Val Trp Ser Ser Pro Lys Asp Val Cys Lys Arg Lys Ser
    995   1000   1005

Cys Lys Thr Pro Pro Asp Pro Val Asn Gly Met Val His Val Ile Thr
    1010   1015   1020

Asp Ile Gln Val Gly Ser Arg Ile Asn Tyr Ser Cys Thr Thr Gly His
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Arg Leu Ile Gly His Ser Ser Ala Glu Cys Ile Leu Ser Gly Asn Thr
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Ala His Trp Ser Thr Lys Pro Pro Ile Cys Gln Arg Ile Pro Cys Gly
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Leu Pro Pro Thr Ile Ala Asn Gly Asp Phe Ile Ser Thr Asn Arg Glu
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Asn Phe His Tyr Gly Ser Val Val Thr Tyr Arg Cys Asn Leu Gly Ser
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Arg Gly Arg Lys Val Phe Glu Leu Val Gly Glu Pro Ser Ile Tyr Cys
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Thr Ser Asn Asp Asp Gln Val Gly Ile Trp Ser Gly Pro Ala Pro Gln
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Cys Ile Ile Pro Asn Lys Cys Thr Pro Pro Asn Val Glu Asn Gly Ile
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Leu Val Ser Asp Asn Arg Ser Leu Phe Ser Leu Asn Glu Val Val Glu
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Phe Arg Cys Gln Pro Gly Phe Val Met Lys Gly Pro Arg Arg Val Lys
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Cys Gln Ala Leu Asn Lys Trp Glu Pro Glu Leu Pro Ser Cys Ser Arg
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Val Cys Gln Pro Pro Pro Glu Ile Leu His Gly Glu His Thr Pro Ser
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His Gln Asp Asn Phe Ser Pro Gly Gln Glu Val Phe Tyr Ser Cys Glu
        1220   1225   1230

Pro Gly Tyr Asp Leu Arg Gly Ala Ala Ser Leu His Cys Thr Pro Gln
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Gly Asp Trp Ser Pro Glu Ala Pro Arg Cys Ala Val Lys Ser Cys Asp
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Asp Phe Leu Gly Gln Leu Pro His Gly Arg Val Leu Phe Pro Leu Asn
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Leu Gln Leu Gly Ala Lys Val Ser Phe Val Cys Asp Glu Gly Phe Arg
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Leu Lys Gly Ser Ser Val Ser His Cys Val Leu Val Gly Met Arg Ser
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Leu Trp Asn Asn Ser Val Pro Val Cys Glu His Ile Phe Cys Pro Asn
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Pro Pro Ala Ile Leu Asn Gly Arg His Thr Gly Thr Pro Ser Gly Asp
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Ile Pro Tyr Gly Lys Glu Ile Ser Tyr Thr Cys Asp Pro His Pro Asp
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Arg Gly Met Thr Phe Asn Leu Ile Gly Glu Ser Thr Ile Arg Cys Thr
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Ser Asp Pro His Gly Asn Gly Val Trp Ser Ser Pro Ala Pro Arg Cys
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Glu Leu Ser Val Arg Ala Gly His Cys Lys Thr Pro Glu Gln Phe Pro
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Phe Ala Ser Pro Thr Ile Pro Ile Asn Asp Phe Glu Phe Pro Val Gly
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Thr Ser Leu Asn Tyr Glu Cys Arg Pro Gly Tyr Phe Gly Lys Met Phe
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Ser Ile Ser Cys Leu Glu Asn Leu Val Trp Ser Ser Val Glu Asp Asn
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Cys Arg Arg Lys Ser Cys Gly Pro Pro Glu Pro Phe Asn Gly Met
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Val His Ile Asn Thr Asp Thr Gln Phe Gly Ser Thr Val Asn Tyr Ser
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Val Ser Gly Asn Asn Val Thr Trp Asp Lys Lys Ala Pro Ile Cys Glu
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Ile Ile Ser Cys Glu Pro Pro Pro Thr Ile Ser Asn Gly Asp Phe Tyr
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Ser Asn Asn Arg Thr Ser Phe His Asn Gly Thr Val Val Thr Tyr Gln
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Cys His Thr Gly Pro Asp Gly Glu Gln Leu Phe Glu Leu Val Gly Glu
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Arg Ser Ile Tyr Cys Thr Ser Lys Asp Asp Gln Val Gly Val Trp Ser
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Ser Pro Pro Pro Arg Cys Ile Ser Thr Asn Lys Cys Thr Ala Pro Glu
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Val Glu Asn Ala Ile Arg Val Pro Gly Asn Arg Ser Phe Phe Ser Leu
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Thr Glu Ile Ile Arg Phe Arg Cys Gln Pro Gly Phe Val Met Val Gly
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Ser His Thr Val Gln Cys Gln Thr Asn Gly Arg Trp Gly Pro Lys Leu
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Pro His Cys Ser Arg Val Cys Gln Pro Pro Pro Glu Ile Leu His Gly
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Glu His Thr Leu Ser His Gln Asp Asn Phe Ser Pro Gly Gln Glu Val
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His Cys Thr Pro Gln Gly Asp Trp Ser Pro Glu Ala Pro Arg Cys Thr
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Val Lys Ser Cys Asp Asp Phe Leu Gly Gln Leu Pro His Gly Arg Val
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Leu Leu Pro Leu Asn Leu Gln Leu Gly Ala Lys Val Ser Phe Val Cys
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Asp Glu Gly Phe Arg Leu Lys Gly Arg Ser Ala Ser His Cys Val Leu
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Ala Gly Met Lys Ala Leu Trp Asn Ser Ser Val Pro Val Cys Glu Gln
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Thr Pro Phe Gly Asp Ile Pro Tyr Gly Lys Glu Ile Ser Tyr Ala Cys
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Asp Thr His Pro Asp Arg Gly Met Thr Phe Asn Leu Ile Gly Glu Ser
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Val Gly Lys Gly Phe Ile Phe Cys Thr Asp Gln Gly Ile Trp Ser Gln
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Lys Cys Thr Ser Arg Ala His Asp Ala Leu Ile Val Gly Thr Leu Ser
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<211> 384
<212> PRT
<213> Homo sapiens

<400> 5

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Pro Gly Leu Leu Leu Ala Ala Met Val Leu Leu Leu Tyr Ser Phe Ser
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Asp Ala Cys Glu Glu Pro Pro Thr Phe Glu Ala Met Glu Leu Ile Gly
            35                  40                  45

Lys Pro Lys Pro Tyr Tyr Glu Ile Gly Glu Arg Val Asp Tyr Lys Cys
        50                  55                  60

Lys Lys Gly Tyr Phe Tyr Ile Pro Pro Leu Ala Thr His Thr Ile Cys
 65                 70                  75                  80

Asp Arg Asn His Thr Trp Leu Pro Val Ser Asp Asp Ala Cys Tyr Arg
                85                  90                  95

Glu Thr Cys Pro Tyr Ile Arg Asp Pro Leu Asn Gly Gln Ala Val Pro
               100                 105                 110

Ala Asn Gly Thr Tyr Glu Phe Gly Tyr Gln Met His Phe Ile Cys Asn
           115                 120                 125

Glu Gly Tyr Tyr Leu Ile Gly Glu Glu Ile Leu Tyr Cys Glu Leu Lys
       130                 135                 140
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Gly Ser Val Ala Ile Trp Ser Gly Lys Pro Pro Ile Cys Glu Lys Val
145             150             155             160

Leu Cys Thr Pro Pro Pro Lys Ile Lys Asn Gly Lys His Thr Phe Ser
            165             170             175

Glu Val Glu Val Phe Glu Tyr Leu Asp Ala Val Thr Tyr Ser Cys Asp
        180             185             190

Pro Ala Pro Gly Pro Asp Pro Phe Ser Leu Ile Gly Glu Ser Thr Ile
        195             200             205

Tyr Cys Gly Asp Asn Ser Val Trp Ser Arg Ala Ala Pro Glu Cys Lys
    210             215             220

Val Val Lys Cys Arg Phe Pro Val Val Glu Asn Gly Lys Gln Ile Ser
225             230             235             240

Gly Phe Gly Lys Lys Phe Tyr Tyr Lys Ala Thr Val Met Phe Glu Cys
            245             250             255

Asp Lys Gly Phe Tyr Leu Asp Gly Ser Asp Thr Ile Val Cys Asp Ser
            260             265             270

Asn Ser Thr Trp Asp Pro Pro Val Pro Lys Cys Leu Lys Val Ser Thr
        275             280             285

Ser Ser Thr Thr Lys Ser Pro Ala Ser Ser Ala Ser Gly Pro Arg Pro
    290             295             300

Thr Tyr Lys Pro Pro Val Ser Asn Tyr Pro Gly Tyr Pro Lys Pro Glu
305             310             315             320

Glu Gly Ile Leu Asp Ser Leu Asp Val Trp Val Ile Ala Val Ile Val
            325             330             335

Ile Ala Ile Val Val Gly Val Ala Val Ile Cys Val Val Pro Tyr Arg
            340             345             350

Tyr Leu Gln Arg Arg Lys Lys Lys Gly Lys Ala Asp Gly Gly Ala Glu
        355             360             365

Tyr Ala Thr Tyr Gln Thr Lys Ser Thr Thr Pro Ala Glu Gln Arg Gly
    370             375             380
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<210> 6
<211> 1530
<212> DNA
<213> Homo sapiens

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<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
     primer

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<210> 8
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
     primer

<400> 8
acagtgctcg agcattcagg tggtgggcca ctcca   35

<210> 9
<211> 41
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      primer

<400> 9
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<210> 10
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      primer

<400> 10
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<210> 11
<211> 41
<212> DNA
<213> Artificial Sequence

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      primer

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<210> 12
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<212> DNA
<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
      primer

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<210> 13
<211> 996
<212> PRT
<213> Homo sapiens

<400> 13
Met Thr Val Ala Arg Pro Ser Val Pro Ala Ala Leu Pro Leu Leu Gly
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Glu Leu Pro Arg Leu Leu Leu Leu Val Leu Leu Cys Leu Pro Ala Val
            20   25   30

Trp Gly Asp Cys Gly Leu Pro Pro Asp Val Pro Asn Ala Gln Pro Ala
     35   40   45

Leu Glu Gly Arg Thr Ser Phe Pro Glu Asp Thr Val Ile Thr Tyr Lys
     50   55   60

Cys Glu Glu Ser Phe Val Lys Ile Pro Gly Glu Lys Asp Ser Val Ile
65   70   75   80

Cys Leu Lys Gly Ser Gln Trp Ser Asp Ile Glu Glu Phe Cys Asn Arg
          85   90   95

Ser Cys Glu Val Pro Thr Arg Leu Asn Ser Ala Ser Leu Lys Gln Pro
        100   105   110

Tyr Ile Thr Gln Asn Tyr Phe Pro Val Gly Thr Val Val Glu Tyr Glu
       115   120   125

Cys Arg Pro Gly Tyr Arg Arg Glu Pro Ser Leu Ser Pro Lys Leu Thr
     130   135   140

Cys Leu Gln Asn Leu Lys Trp Ser Thr Ala Val Glu Phe Cys Lys Lys
145   150   155   160

Lys Ser Cys Pro Asn Pro Gly Glu Ile Arg Asn Gly Gln Ile Asp Val
        165   170   175

Pro Gly Gly Ile Leu Phe Gly Ala Thr Ile Ser Phe Ser Cys Asn Thr
        180   185   190

Gly Tyr Lys Leu Phe Gly Ser Thr Ser Ser Phe Cys Leu Ile Ser Gly
       195   200   205

Ser Ser Val Gln Trp Ser Asp Pro Leu Pro Glu Cys Arg Glu Ile Tyr
     210   215   220

Cys Pro Ala Pro Pro Gln Ile Asp Asn Gly Ile Ile Gln Gly Glu Arg
225   230   235   240

Asp His Tyr Gly Tyr Arg Gln Ser Val Thr Tyr Ala Cys Asn Lys Gly
        245   250   255

Phe Thr Met Ile Gly Glu His Ser Ile Tyr Cys Thr Val Asn Asn Asp
       260   265   270

Glu Gly Glu Trp Ser Gly Pro Pro Pro Glu Cys Ser Ser Pro Asn Lys
       275   280   285

Cys Thr Pro Pro Asn Val Glu Asn Gly Ile Leu Val Ser Asp Asn Arg
     290   295   300

Ser Leu Phe Ser Leu Asn Glu Val Val Glu Phe Arg Cys Gln Pro Gly
305   310   315   320

Phe Val Met Lys Gly Pro Arg Arg Val Lys Cys Gln Ala Leu Asn Lys
        325   330   335

Trp Glu Pro Glu Leu Pro Ser Cys Ser Arg Val Cys Gln Pro Pro Pro
        340   345   350

Asp Val Leu His Ala Glu Arg Thr Gln Arg Asp Lys Asp Asn Phe Ser
        355   360   365

Pro Gly Gln Glu Val Phe Tyr Ser Cys Glu Pro Gly Tyr Asp Leu Arg
    370   375   380

Gly Ala Ala Ser Met Arg Cys Thr Pro Gln Gly Asp Trp Ser Pro Ala
385   390   395   400

Ala Pro Thr Cys Glu Val Lys Ser Cys Asp Asp Phe Met Gly Gln Leu
            405   410   415

Leu Asn Gly Arg Val Leu Phe Pro Val Asn Leu Gln Leu Gly Ala Lys
        420   425   430

Val Asp Phe Val Cys Asp Glu Gly Phe Gln Leu Lys Gly Ser Ser Ala
        435   440   445

Ser Tyr Cys Val Leu Ala Gly Met Glu Ser Leu Trp Asn Ser Ser Val
    450   455   460

Pro Val Cys Glu Gln Ile Phe Cys Pro Ser Pro Pro Val Ile Pro Asn
465   470   475   480

Gly Arg His Thr Gly Lys Pro Leu Glu Val Phe Pro Phe Gly Lys Ala
            485   490   495

Val Asn Tyr Thr Cys Asp Pro His Pro Asp Arg Gly Thr Ser Phe Asp
        500   505   510

Leu Ile Gly Glu Ser Thr Ile Arg Cys Thr Ser Asp Pro Gln Gly Asn
        515   520   525

Gly Val Trp Ser Ser Pro Ala Pro Arg Cys Gly Ile Leu Gly His Cys
    530   535   540

Gln Ala Pro Asp His Phe Leu Phe Ala Lys Leu Lys Thr Gln Thr Asn
545   550   555   560

Ala Ser Asp Phe Pro Ile Gly Thr Ser Leu Lys Tyr Glu Cys Arg Pro
            565   570   575

Glu Tyr Tyr Gly Arg Pro Phe Ser Ile Thr Cys Leu Asp Asn Leu Val
        580   585   590

Trp Ser Ser Pro Lys Asp Val Cys Lys Arg Lys Ser Cys Lys Thr Pro
    595   600   605

Pro Asp Pro Val Asn Gly Met Val His Val Ile Thr Asp Ile Gln Val
    610   615   620

Gly Ser Arg Ile Asn Tyr Ser Cys Thr Thr Gly His Arg Leu Ile Gly
625   630   635   640

His Ser Ser Ala Glu Cys Ile Leu Ser Gly Asn Ala Ala His Trp Ser
            645   650   655

Thr Lys Pro Pro Ile Cys Gln Arg Ile Pro Cys Gly Leu Pro Pro Thr
            660   665   670

Ile Ala Asn Gly Asp Phe Ile Ser Thr Asn Arg Glu Asn Phe His Tyr
            675   680   685

Gly Ser Val Val Thr Tyr Arg Cys Asn Pro Gly Ser Gly Gly Arg Lys
        690   695   700

Val Phe Glu Leu Val Gly Glu Pro Ser Ile Tyr Cys Thr Ser Asn Asp
705   710   715   720

Asp Gln Val Gly Ile Trp Ser Gly Pro Ala Pro Gln Cys Ile Ile Pro
            725   730   735

Asn Lys Cys Thr Pro Pro Asn Val Glu Asn Gly Ile Leu Val Ser Asp
            740   745   750

Asn Arg Ser Leu Phe Ser Leu Asn Glu Val Val Glu Phe Arg Cys Gln
            755   760   765

Pro Gly Phe Val Met Lys Gly Pro Arg Arg Val Lys Cys Gln Ala Leu
    770   775   780

Asn Lys Trp Glu Pro Glu Leu Pro Ser Cys Ser Arg Val Cys Gln Pro
785   790   795   800

Pro Pro Asp Val Leu His Ala Glu Arg Thr Gln Arg Asp Lys Asp Asn
            805   810   815

Phe Ser Pro Gly Gln Glu Val Phe Tyr Ser Cys Glu Pro Gly Tyr Asp
            820   825   830

Leu Arg Gly Ala Ala Ser Met Arg Cys Thr Pro Gln Gly Asp Trp Ser
        835   840   845

Pro Ala Ala Pro Thr Cys Glu Val Lys Ser Cys Asp Asp Phe Met Gly
    850   855   860

Gln Leu Leu Asn Gly Arg Val Leu Phe Pro Val Asn Leu Gln Leu Gly
865   870   875   880

Ala Lys Val Asp Phe Val Cys Asp Glu Gly Phe Gln Leu Lys Gly Ser
            885   890   895

Ser Ala Ser Tyr Cys Val Leu Ala Gly Met Glu Ser Leu Trp Asn Ser
        900   905   910

Ser Val Pro Val Cys Glu Gln Ile Phe Cys Pro Ser Pro Pro Val Ile
    915   920   925

Pro Asn Gly Arg His Thr Gly Lys Pro Leu Glu Val Phe Pro Phe Gly
930   935   940

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Lys Ala Val Asn Tyr Thr Cys Asp Pro His Pro Asp Arg Gly Thr Ser
945                 950             955             Arg Gly Thr 960

Phe Asp Leu Ile Gly Glu Ser Thr Ile Arg Cys Thr Ser Asp Pro Gln
            965             970             Cys Thr Ser 975

Gly Asn Gly Val Trp Ser Ser Pro Ala Pro Arg Cys Gly Ile His His
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His His His His
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<211> 2997
<212> DNA
<213> Homo sapiens

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<211> 1446
<212> PRT
<213> Homo sapiens

<400> 15
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Glu Leu Pro Arg Leu Leu Leu Val Leu Leu Cys Leu Pro Ala Val
            20                  25                  30

Trp Gly Asp Cys Gly Leu Pro Pro Asp Val Pro Asn Ala Gln Pro Ala
         35                  40                  45

Leu Glu Gly Arg Thr Ser Phe Pro Glu Asp Thr Val Ile Thr Tyr Lys
     50                  55                  60

Cys Glu Glu Ser Phe Val Lys Ile Pro Gly Glu Lys Asp Ser Val Ile
 65                  70                  75                  80

Cys Leu Lys Gly Ser Gln Trp Ser Asp Ile Glu Glu Phe Cys Asn Arg
             85                  90                  95

Ser Cys Glu Val Pro Thr Arg Leu Asn Ser Ala Ser Leu Lys Gln Pro
            100                 105                 110

Tyr Ile Thr Gln Asn Tyr Phe Pro Val Gly Thr Val Val Glu Tyr Glu
        115                 120                 125

Cys Arg Pro Gly Tyr Arg Arg Glu Pro Ser Leu Ser Pro Lys Leu Thr
    130                 135                 140

Cys Leu Gln Asn Leu Lys Trp Ser Thr Ala Val Glu Phe Cys Lys Lys
145                 150                 155                 160

Lys Ser Cys Pro Asn Pro Gly Glu Ile Arg Asn Gly Gln Ile Asp Val
                165                 170                 175

Pro Gly Gly Ile Leu Phe Gly Ala Thr Ile Ser Phe Ser Cys Asn Thr
            180                 185                 190

Gly Tyr Lys Leu Phe Gly Ser Thr Ser Ser Phe Cys Leu Ile Ser Gly
        195                 200                 205
```

```
Ser Ser Val Gln Trp Ser Asp Pro Leu Pro Glu Cys Arg Glu Ile Tyr
    210             215             220
```

```
Cys Pro Ala Pro Pro Gln Ile Asp Asn Gly Ile Ile Gln Gly Glu Arg
225             230             235                 240
```

```
Asp His Tyr Gly Tyr Arg Gln Ser Val Thr Tyr Ala Cys Asn Lys Gly
            245             250                 255
```

```
Phe Thr Met Ile Gly Glu His Ser Ile Tyr Cys Thr Val Asn Asn Asp
            260             265             270
```

```
Glu Gly Glu Trp Ser Gly Pro Pro Pro Glu Cys Ser Ser Pro Asn Lys
        275             280             285
```

```
Cys Thr Pro Pro Asn Val Glu Asn Gly Ile Leu Val Ser Asp Asn Arg
    290             295             300
```

```
Ser Leu Phe Ser Leu Asn Glu Val Val Glu Phe Arg Cys Gln Pro Gly
305             310             315                 320
```

```
Phe Val Met Lys Gly Pro Arg Arg Val Lys Cys Gln Ala Leu Asn Lys
            325             330             335
```

```
Trp Glu Pro Glu Leu Pro Ser Cys Ser Arg Val Cys Gln Pro Pro Pro
            340             345             350
```

```
Asp Val Leu His Ala Glu Arg Thr Gln Arg Asp Lys Asp Asn Phe Ser
            355             360             365
```

```
Pro Gly Gln Glu Val Phe Tyr Ser Cys Glu Pro Gly Tyr Asp Leu Arg
    370             375             380
```

```
Gly Ala Ala Ser Met Arg Cys Thr Pro Gln Gly Asp Trp Ser Pro Ala
385             390             395                 400
```

```
Ala Pro Thr Cys Glu Val Lys Ser Cys Asp Asp Phe Met Gly Gln Leu
            405             410                 415
```

```
Leu Asn Gly Arg Val Leu Phe Pro Val Asn Leu Gln Leu Gly Ala Lys
            420             425             430
```

```
Val Asp Phe Val Cys Asp Glu Gly Phe Gln Leu Lys Gly Ser Ser Ala
        435             440             445
```

```
Ser Tyr Cys Val Leu Ala Gly Met Glu Ser Leu Trp Asn Ser Ser Val
    450             455             460
```

```
Pro Val Cys Glu Gln Ile Phe Cys Pro Ser Pro Pro Val Ile Pro Asn
465             470             475                 480
```

```
Gly Arg His Thr Gly Lys Pro Leu Glu Val Phe Pro Phe Gly Lys Ala
            485             490                 495
```

```
Val Asn Tyr Thr Cys Asp Pro His Pro Asp Arg Gly Thr Ser Phe Asp
            500             505             510
```

```
Leu Ile Gly Glu Ser Thr Ile Arg Cys Thr Ser Asp Pro Gln Gly Asn
        515             520             525

Gly Val Trp Ser Ser Pro Ala Pro Arg Cys Gly Ile Leu Gly His Cys
        530             535             540

Gln Ala Pro Asp His Phe Leu Phe Ala Lys Leu Lys Thr Gln Thr Asn
545             550             555             560

Ala Ser Asp Phe Pro Ile Gly Thr Ser Leu Lys Tyr Glu Cys Arg Pro
                565             570             575

Glu Tyr Tyr Gly Arg Pro Phe Ser Ile Thr Cys Leu Asp Asn Leu Val
            580             585             590

Trp Ser Ser Pro Lys Asp Val Cys Lys Arg Lys Ser Cys Lys Thr Pro
        595             600             605

Pro Asp Pro Val Asn Gly Met Val His Val Ile Thr Asp Ile Gln Val
    610             615             620

Gly Ser Arg Ile Asn Tyr Ser Cys Thr Thr Gly His Arg Leu Ile Gly
625             630             635             640

His Ser Ser Ala Glu Cys Ile Leu Ser Gly Asn Ala Ala His Trp Ser
            645             650             655

Thr Lys Pro Pro Ile Cys Gln Arg Ile Pro Cys Gly Leu Pro Pro Thr
            660             665             670

Ile Ala Asn Gly Asp Phe Ile Ser Thr Asn Arg Glu Asn Phe His Tyr
        675             680             685

Gly Ser Val Val Thr Tyr Arg Cys Asn Pro Gly Ser Gly Gly Arg Lys
    690             695             700

Val Phe Glu Leu Val Gly Glu Pro Ser Ile Tyr Cys Thr Ser Asn Asp
705             710             715             720

Asp Gln Val Gly Ile Trp Ser Gly Pro Ala Pro Gln Cys Ile Ile Pro
            725             730             735

Asn Lys Cys Thr Pro Pro Asn Val Glu Asn Gly Ile Leu Val Ser Asp
        740             745             750

Asn Arg Ser Leu Phe Ser Leu Asn Glu Val Val Glu Phe Arg Cys Gln
        755             760             765

Pro Gly Phe Val Met Lys Gly Pro Arg Arg Val Lys Cys Gln Ala Leu
    770             775             780

Asn Lys Trp Glu Pro Glu Leu Pro Ser Cys Ser Arg Val Cys Gln Pro
785             790             795             800

Pro Pro Asp Val Leu His Ala Glu Arg Thr Gln Arg Asp Lys Asp Asn
            805             810             815
```

Phe Ser Pro Gly Gln Glu Val Phe Tyr Ser Cys Glu Pro Gly Tyr Asp
            820   825   830

Leu Arg Gly Ala Ala Ser Met Arg Cys Thr Pro Gln Gly Asp Trp Ser
        835   840   845

Pro Ala Ala Pro Thr Cys Glu Val Lys Ser Cys Asp Asp Phe Met Gly
    850   855   860

Gln Leu Leu Asn Gly Arg Val Leu Phe Pro Val Asn Leu Gln Leu Gly
865   870   875   880

Ala Lys Val Asp Phe Val Cys Asp Glu Gly Phe Gln Leu Lys Gly Ser
                885   890   895

Ser Ala Ser Tyr Cys Val Leu Ala Gly Met Glu Ser Leu Trp Asn Ser
            900   905   910

Ser Val Pro Val Cys Glu Gln Ile Phe Cys Pro Ser Pro Pro Val Ile
        915   920   925

Pro Asn Gly Arg His Thr Gly Lys Pro Leu Glu Val Phe Pro Phe Gly
    930   935   940

Lys Ala Val Asn Tyr Thr Cys Asp Pro His Pro Asp Arg Gly Thr Ser
945   950   955   960

Phe Asp Leu Ile Gly Glu Ser Thr Ile Arg Cys Thr Ser Asp Pro Gln
            965   970   975

Gly Asn Gly Val Trp Ser Ser Pro Ala Pro Arg Cys Gly Ile Leu Gly
            980   985   990

His Cys Gln Ala Pro Asp His Phe Leu Phe Ala Lys Leu Lys Thr Gln
    995   1000   1005

Thr Asn Ala Ser Asp Phe Pro Ile Gly Thr Ser Leu Lys Tyr Glu Cys
    1010   1015   1020

Arg Pro Glu Tyr Tyr Gly Arg Pro Phe Ser Ile Thr Cys Leu Asp Asn
1025   1030   1035   1040

Leu Val Trp Ser Ser Pro Lys Asp Val Cys Lys Arg Lys Ser Cys Lys
            1045   1050   1055

Thr Pro Pro Asp Pro Val Asn Gly Met Val His Val Ile Thr Asp Ile
            1060   1065   1070

Gln Val Gly Ser Arg Ile Asn Tyr Ser Cys Thr Thr Gly His Arg Leu
            1075   1080   1085

Ile Gly His Ser Ser Ala Glu Cys Ile Leu Ser Gly Asn Ala Ala His
    1090   1095   1100

Trp Ser Thr Lys Pro Pro Ile Cys Gln Arg Ile Pro Cys Gly Leu Pro
1105   1110   1115   1120

Pro Thr Ile Ala Asn Gly Asp Phe Ile Ser Thr Asn Arg Glu Asn Phe
           1125   1130   1135

His Tyr Gly Ser Val Val Thr Tyr Arg Cys Asn Pro Gly Ser Gly Gly
        1140   1145   1150

Arg Lys Val Phe Glu Leu Val Gly Glu Pro Ser Ile Tyr Cys Thr Ser
      1155   1160   1165

Asn Asp Asp Gln Val Gly Ile Trp Ser Gly Pro Ala Pro Gln Cys Ile
    1170   1175   1180

Ile Pro Asn Lys Cys Thr Pro Pro Asn Val Glu Asn Gly Ile Leu Val
1185   1190   1195   1200

Ser Asp Asn Arg Ser Leu Phe Ser Leu Asn Glu Val Val Glu Phe Arg
        1205   1210   1215

Cys Gln Pro Gly Phe Val Met Lys Gly Pro Arg Arg Val Lys Cys Gln
      1220   1225   1230

Ala Leu Asn Lys Trp Glu Pro Glu Leu Pro Ser Cys Ser Arg Val Cys
     1235   1240   1245

Gln Pro Pro Pro Asp Val Leu His Ala Glu Arg Thr Gln Arg Asp Lys
    1250   1255   1260

Asp Asn Phe Ser Pro Gly Gln Glu Val Phe Tyr Ser Cys Glu Pro Gly
1265   1270   1275   1280

Tyr Asp Leu Arg Gly Ala Ala Ser Met Arg Cys Thr Pro Gln Gly Asp
        1285   1290   1295

Trp Ser Pro Ala Ala Pro Thr Cys Glu Val Lys Ser Cys Asp Asp Phe
      1300   1305   1310

Met Gly Gln Leu Leu Asn Gly Arg Val Leu Phe Pro Val Asn Leu Gln
     1315   1320   1325

Leu Gly Ala Lys Val Asp Phe Val Cys Asp Glu Gly Phe Gln Leu Lys
   1330   1335   1340

Gly Ser Ser Ala Ser Tyr Cys Val Leu Ala Gly Met Glu Ser Leu Trp
1345   1350   1355   1360

Asn Ser Ser Val Pro Val Cys Glu Gln Ile Phe Cys Pro Ser Pro Pro
        1365   1370   1375

Val Ile Pro Asn Gly Arg His Thr Gly Lys Pro Leu Glu Val Phe Pro
      1380   1385   1390

Phe Gly Lys Ala Val Asn Tyr Thr Cys Asp Pro His Pro Asp Arg Gly
     1395   1400   1405

Thr Ser Phe Asp Leu Ile Gly Glu Ser Thr Ile Arg Cys Thr Ser Asp
    1410   1415   1420

Pro Gln Gly Asn Gly Val Trp Ser Ser Pro Ala Pro Arg Cys Gly Ile
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His His His His His His
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<211> 4347
<212> DNA
<213> Homo sapiens

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gatgtaccta atgcccagcc agctttggaa ggccgtacaa gttttcccga ggatactgta 180
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<210> 17
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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
     primer

<400> 17
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<210> 18
<211> 37
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
     primer

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<210> 19
<211> 771
<212> PRT
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<400> 19
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Glu Leu Pro Arg Leu Leu Leu Leu Val Leu Leu Cys Leu Pro Ala Val
                20   25   30

Trp Gly Asp Cys Gly Leu Pro Pro Asp Val Pro Asn Ala Gln Pro Ala
            35   40   45

Leu Glu Gly Arg Thr Ser Phe Pro Glu Asp Thr Val Ile Thr Tyr Lys
    50   55   60

Cys Glu Glu Ser Phe Val Lys Ile Pro Gly Glu Lys Asp Ser Val Ile
 65   70   75   80

Cys Leu Lys Gly Ser Gln Trp Ser Asp Ile Glu Glu Phe Cys Asn Arg
            85   90   95

Ser Cys Glu Val Pro Thr Arg Leu Asn Ser Ala Ser Leu Lys Gln Pro
            100   105   110

Tyr Ile Thr Gln Asn Tyr Phe Pro Val Gly Thr Val Val Glu Tyr Glu
        115   120   125

Cys Arg Pro Gly Tyr Arg Arg Glu Pro Ser Leu Ser Pro Lys Leu Thr
    130   135   140

Cys Leu Gln Asn Leu Lys Trp Ser Thr Ala Val Glu Phe Cys Lys Lys
145   150   155   160

Lys Ser Cys Pro Asn Pro Gly Glu Ile Arg Asn Gly Gln Ile Asp Val
            165   170   175

Pro Gly Gly Ile Leu Phe Gly Ala Thr Ile Ser Phe Ser Cys Asn Thr
            180   185   190

Gly Tyr Lys Leu Phe Gly Ser Thr Ser Ser Phe Cys Leu Ile Ser Gly
        195   200   205

Ser Ser Val Gln Trp Ser Asp Pro Leu Pro Glu Cys Arg Glu Ile Tyr
    210   215   220

Cys Pro Ala Pro Pro Gln Ile Asp Asn Gly Ile Ile Gln Gly Glu Arg
225   230   235   240

Asp His Tyr Gly Tyr Arg Gln Ser Val Thr Tyr Ala Cys Asn Lys Gly
            245   250   255

Phe Thr Met Ile Gly Glu His Ser Ile Tyr Cys Thr Val Asn Asn Asp
            260   265   270

Glu Gly Glu Trp Ser Gly Pro Pro Pro Glu Cys Ser Ser Pro Asn Lys
        275   280   285

Cys Thr Pro Pro Asn Val Glu Asn Gly Ile Leu Val Ser Asp Asn Arg
    290   295   300

Ser Leu Phe Ser Leu Asn Glu Val Val Glu Phe Arg Cys Gln Pro Gly
305   310   315   320

Phe Val Met Lys Gly Pro Arg Arg Val Lys Cys Gln Ala Leu Asn Lys
            325   330   335

Trp Glu Pro Glu Leu Pro Ser Cys Ser Arg Val Cys Gln Pro Pro Pro
            340   345   350

Asp Val Leu His Ala Glu Arg Thr Gln Arg Asp Lys Asp Asn Phe Ser
        355   360   365

Pro Gly Gln Glu Val Phe Tyr Ser Cys Glu Pro Gly Tyr Asp Leu Arg
    370   375   380

Gly Ala Ala Ser Met Arg Cys Thr Pro Gln Gly Asp Trp Ser Pro Ala
385   390   395   400

Ala Pro Thr Cys Glu Val Lys Ser Cys Asp Asp Phe Met Gly Gln Leu
            405   410   415

Leu Asn Gly Arg Val Leu Phe Pro Val Asn Leu Gln Leu Gly Ala Lys
            420   425   430

Val Asp Phe Val Cys Asp Glu Gly Phe Gln Leu Lys Gly Ser Ser Ala
        435   440   445

Ser Tyr Cys Val Leu Ala Gly Met Glu Ser Leu Trp Asn Ser Ser Val
    450   455   460

Pro Val Cys Glu Gln Ile Phe Cys Pro Ser Pro Pro Val Ile Pro Asn
465   470   475   480

Gly Arg His Thr Gly Lys Pro Leu Glu Val Phe Pro Phe Gly Lys Ala
            485   490   495

Val Asn Tyr Thr Cys Asp Pro His Pro Asp Arg Gly Thr Ser Phe Asp
            500   505   510

Leu Ile Gly Glu Ser Thr Ile Arg Cys Thr Ser Asp Pro Gln Gly Asn
            515   520   525

Gly Val Trp Ser Ser Pro Ala Pro Arg Cys Gly Ile Leu Val Glu Ser
    530   535   540

Lys Tyr Gly Pro Pro Cys Pro Ser Cys Pro Ala Pro Glu Phe Leu Gly
545   550   555   560

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
            565   570   575

```
Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln
            580             585                 590

Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val
            595             600             605

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr
    610             615                 620

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
625             630             635                 640

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile
            645             650                 655

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
            660             665             670

Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser
        675             680                 685

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
    690             695             700

Trp Glu Ser Asn Gly Gln Pro Glu Asp Asn Tyr Lys Thr Thr Pro Pro
705             710                 715                 720

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val
            725                 730                 735

Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met
            740                 745             750

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
    755             760                 765

Pro Gly Lys
    770


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<211> 2325
<212> DNA
<213> Homo sapiens

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tctgacaaca gaagcttatt ttccttaaat gaagttgtgg agtttaggtg tcagcctggc 960
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ctaccaagct gctccagggt atgtcagcca cctccagatg tcctgcatgc tgagcgtacc 1080
caaagggaca aggacaactt ttcacctggg caggaagtgt tctacagctg tgagcccggc 1140
tacgacctca gaggggctgc gtctatgcgc tgcacacccc agggagactg gagccctgca 1200
gcccccacat gtgaagtgaa atcctgtgat gacttcatgg gccaacttct taatggccgt 1260
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tttcaattaa aaggcagctc tgctagttac tgtgtcttgg ctggaatgga aagcctttgg 1380
aatagcagtg ttccagtgtg tgaacaaatc ttttgtccaa gtcctccagt tattcctaat 1440
gggagacaca caggaaaacc tctggaagtc tttccctttg gaaaagcagt aaattacaca 1500
tgcgacccc acccagacag agggacgagc ttcgacctca ttggagagag caccatccgc 1560
tgcacaagtg accctcaagg gaatgggggtt tggagcagcc ctgcccctcg ctgtggaatt 1620
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tggtacgtgg atggcgtgga ggtgcataat gccaagacaa agccgcggga ggagcagttc 1860
aacagcacgt accgtgtggt cagcgtcctc accgtcctgc accaggactg gctgaacggc 1920
aaggagtaca gtgcaaggt ctccaacaaa ggcctcccgt cctccatcga gaaaaccatc 1980
tccaaagcca aagggcagcc ccgagagcca caggtgtaca ccctgccccc atcccaggag 2040
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atcgccgtgg agtgggagag caatgggcag ccggaggaca actacaagac cacgcctccc 2160
gtgctggact ccgacggctc cttcttcctc tacagcaggc taaccgtgga caagagcagg 2220
tggcaggagg ggaatgtctt ctcatgctcc gtgatgcatg aggctctgca caaccactac 2280
acacagaaga gcctctccct gtctccgggt aaatgataaa gatct 2325
```



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<210> 21
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
     primer

<400> 21
atatacgaat tctgggtcac tgtgaggagc caccaacatt tgaagc                      46



<210> 22
<211> 57
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
     primer

<400> 22
acagtgagat ctttagtgat ggtgatggtg atgcgacact ttaagacact ttggaac         57
```

<210> 23
<211> 802
<212> PRT
<213> Homo sapiens

<400> 23
Met Thr Val Ala Arg Pro Ser Val Pro Ala Ala Leu Pro Leu Leu Gly
1   5   10   15

Glu Leu Pro Arg Leu Leu Leu Leu Val Leu Leu Cys Leu Pro Ala Val
                20   25   30

Trp Gly Asp Cys Gly Leu Pro Pro Asp Val Pro Asn Ala Gln Pro Ala
            35   40   45

Leu Glu Gly Arg Thr Ser Phe Pro Glu Asp Thr Val Ile Thr Tyr Lys
        50   55   60

Cys Glu Glu Ser Phe Val Lys Ile Pro Gly Glu Lys Asp Ser Val Ile
65   70   75   80

Cys Leu Lys Gly Ser Gln Trp Ser Asp Ile Glu Glu Phe Cys Asn Arg
                85   90   95

Ser Cys Glu Val Pro Thr Arg Leu Asn Ser Ala Ser Leu Lys Gln Pro
            100   105   110

Tyr Ile Thr Gln Asn Tyr Phe Pro Val Gly Thr Val Val Glu Tyr Glu
        115   120   125

Cys Arg Pro Gly Tyr Arg Arg Glu Pro Ser Leu Ser Pro Lys Leu Thr
        130   135   140

Cys Leu Gln Asn Leu Lys Trp Ser Thr Ala Val Glu Phe Cys Lys Lys
145   150   155   160

Lys Ser Cys Pro Asn Pro Gly Glu Ile Arg Asn Gly Gln Ile Asp Val
                165   170   175

Pro Gly Gly Ile Leu Phe Gly Ala Thr Ile Ser Phe Ser Cys Asn Thr
            180   185   190

Gly Tyr Lys Leu Phe Gly Ser Thr Ser Ser Phe Cys Leu Ile Ser Gly
        195   200   205

Ser Ser Val Gln Trp Ser Asp Pro Leu Pro Glu Cys Arg Glu Ile Tyr
        210   215   220

Cys Pro Ala Pro Pro Gln Ile Asp Asn Gly Ile Ile Gln Gly Glu Arg
225   230   235   240

Asp His Tyr Gly Tyr Arg Gln Ser Val Thr Tyr Ala Cys Asn Lys Gly
            245   250   255

Phe Thr Met Ile Gly Glu His Ser Ile Tyr Cys Thr Val Asn Asn Asp
            260   265   270

Glu Gly Glu Trp Ser Gly Pro Pro Pro Glu Cys Ser Ser Pro Asn Lys
        275   280   285

Cys Thr Pro Pro Asn Val Glu Asn Gly Ile Leu Val Ser Asp Asn Arg
    290   295   300

Ser Leu Phe Ser Leu Asn Glu Val Val Glu Phe Arg Cys Gln Pro Gly
305   310   315   320

Phe Val Met Lys Gly Pro Arg Arg Val Lys Cys Gln Ala Leu Asn Lys
            325   330   335

Trp Glu Pro Glu Leu Pro Ser Cys Ser Arg Val Cys Gln Pro Pro Pro
            340   345   350

Asp Val Leu His Ala Glu Arg Thr Gln Arg Asp Lys Asp Asn Phe Ser
            355   360   365

Pro Gly Gln Glu Val Phe Tyr Ser Cys Glu Pro Gly Tyr Asp Leu Arg
    370   375   380

Gly Ala Ala Ser Met Arg Cys Thr Pro Gln Gly Asp Trp Ser Pro Ala
385   390   395   400

Ala Pro Thr Cys Glu Val Lys Ser Cys Asp Asp Phe Met Gly Gln Leu
            405   410   415

Leu Asn Gly Arg Val Leu Phe Pro Val Asn Leu Gln Leu Gly Ala Lys
            420   425   430

Val Asp Phe Val Cys Asp Glu Gly Phe Gln Leu Lys Gly Ser Ser Ala
            435   440   445

Ser Tyr Cys Val Leu Ala Gly Met Glu Ser Leu Trp Asn Ser Ser Val
    450   455   460

Pro Val Cys Glu Gln Ile Phe Cys Pro Ser Pro Pro Val Ile Pro Asn
465   470   475   480

Gly Arg His Thr Gly Lys Pro Leu Glu Val Phe Pro Phe Gly Lys Ala
            485   490   495

Val Asn Tyr Thr Cys Asp Pro His Pro Asp Arg Gly Thr Ser Phe Asp
            500   505   510

Leu Ile Gly Glu Ser Thr Ile Arg Cys Thr Ser Asp Pro Gln Gly Asn
            515   520   525

Gly Val Trp Ser Ser Pro Ala Pro Arg Cys Gly Ile Leu Gly His Cys
    530   535   540

Glu Glu Pro Pro Thr Phe Glu Ala Met Glu Leu Ile Gly Lys Pro Lys
545   550   555   560

Pro Tyr Tyr Glu Ile Gly Glu Arg Val Asp Tyr Lys Cys Lys Lys Gly
            565   570   575

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Tyr Phe Tyr Ile Pro Pro Leu Ala Thr His Thr Ile Cys Asp Arg Asn
            580             585             590

His Thr Trp Leu Pro Val Ser Asp Asp Ala Cys Tyr Arg Glu Thr Cys
        595             600             605

Pro Tyr Ile Arg Asp Pro Leu Asn Gly Gln Ala Val Pro Ala Asn Gly
    610             615             620

Thr Tyr Glu Phe Gly Tyr Gln Met His Phe Ile Cys Asn Glu Gly Tyr
625             630             635             640

Tyr Leu Ile Gly Glu Glu Ile Leu Tyr Cys Glu Leu Lys Gly Ser Val
            645             650             655

Ala Ile Trp Ser Gly Lys Pro Pro Ile Cys Glu Lys Val Leu Cys Thr
            660             665             670

Pro Pro Pro Lys Ile Lys Asn Gly Lys His Thr Phe Ser Glu Val Glu
            675             680             685

Val Phe Glu Tyr Leu Asp Ala Val Thr Tyr Ser Cys Asp Pro Ala Pro
    690             695             700

Gly Pro Asp Pro Phe Ser Leu Ile Gly Glu Ser Thr Ile Tyr Cys Gly
705             710             715             720

Asp Asn Ser Val Trp Ser Arg Ala Ala Pro Glu Cys Lys Val Val Lys
            725             730             735

Cys Arg Phe Pro Val Val Glu Asn Gly Lys Gln Ile Ser Gly Phe Gly
            740             745             750

Lys Lys Phe Tyr Tyr Lys Ala Thr Val Met Phe Glu Cys Asp Lys Gly
        755             760             765

Phe Tyr Leu Asp Gly Ser Asp Thr Ile Val Cys Asp Ser Asn Ser Thr
    770             775             780

Trp Asp Pro Pro Val Pro Lys Cys Leu Lys Val Ser His His His His
785             790             795             800

His His
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```
<210> 24
<211> 2415
<212> DNA
<213> Homo sapiens

<400> 24
atgaccgtcg cgcggccgag cgtgcccgcg gcgctgcccc tcctcgggga gctgccccgg 60
ctgctgctgc tggtgctgtt gtgcctgccg gccgtgtggg gtgactgtgg ccttcccccca 120
gatgtaccta atgcccagcc agctttggaa ggccgtacaa gttttcccga ggatactgta 180
ataacgtaca aatgtgaaga aagctttgtg aaaattcctg cgagaagga ctcagtgatc 240
tgccttaagg gcagtcaatg gtcagatatt gaagagttct gcaatcgtag ctgcgaggtg 300
ccaacaaggc taaattctgc atccctcaaa cagccttata tcactcagaa ttattttcca 360
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gtcggtactg ttgtggaata tgagtgccgt ccaggttaca gaagagaacc ttctctatca 420
ccaaaactaa cttgccttca gaatttaaaa tggtccacag cagtcgaatt ttgtaaaaag 480
aaatcatgcc ctaatccggg agaaatacga aatggtcaga ttgatgtacc aggtggcata 540
ttatttggtg caaccatctc cttctcatgt aacacagggt acaaattatt tggctcgact 600
tctagttttt gtcttatttc aggcagctct gtccagtgga gtgacccgtt gccagagtgc 660
agagaaattt attgtccagc accaccacaa attgacaatg gaataattca aggggaacgt 720
gaccattatg gatatagaca gtctgtaacg tatgcatgta ataaggatt caccatgatt 780
ggagagcact ctatttattg tactgtgaat aatgatgaag gagagtggag tggcccacca 840
cctgaatgct cgagtcctaa caaatgcacg cctccaaatg tggaaaatgg aatattggta 900
tctgacaaca gaagcttatt ttccttaaat gaagttgtgg agtttaggtg tcagcctggc 960
tttgtcatga aaggaccccg ccgtgtgaag tgccaggccc tgaacaaatg ggagccggag 1020
ctaccaagct gctccagggt atgtcagcca cctccagatg tcctgcatgc tgagcgtacc 1080
caaagggaca aggacaactt ttcacctggg caggaagtgt tctacagctg tgagcccggc 1140
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gcccccacat gtgaagtgaa atcctgtgat gacttcatgg gccaacttct taatggccgt 1260
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tttcaattaa aaggcagctc tgctagttac tgtgtcttgg ctggaatgga aagcctttgg 1380
aatagcagtg ttccagtgtg tgaacaaatc ttttgtccaa gtcctccagt tattcctaat 1440
gggagacaca caggaaaacc tctggaagtc tttcccttg gaaaagcagt aaattacaca 1500
tgcgaccccc acccagacag agggacgagc ttcgacctca ttggagagag caccatccgc 1560
tgcacaagtg accctcaagg gaatggggtt tggagcagcc ctgcccctcg ctgtggaatt 1620
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ccctactatg agattggtga acgagtagat tataagtgta aaaaaggata cttctatata 1740
cctcctcttg ccacccatac tatttgtgat cggaatcata catggctacc tgtctcagat 1800
gacgcctgtt atagagaaac atgtccatat atacgggatc ctttaaatgg ccaagcagtc 1860
cctgcaaatg ggacttacga gtttggttat cagatgcact ttatttgtaa tgagggttat 1920
tacttaattg gtgaagaaat tctatattgt gaacttaaag gatcagtagc aatttggagc 1980
ggtaagcccc caatatgtga aaaggttttg tgtacaccac ctccaaaaat aaaaaatgga 2040
aaacacacct ttagtgaagt agaagtattt gagtatcttg atgcagtaac ttatagttgt 2100
gatcctgcac ctggaccaga tccattttca cttattggag agagcacgat ttattgtggt 2160
gacaattcag tgtggagtcg tgctgctcca gagtgtaaag tggtcaaatg tcgatttcca 2220
gtagtcgaaa atggaaaaca gatatcagga tttggaaaaa aattttacta caaagcaaca 2280
gttatgtttg aatgcgataa gggttttac ctcgatggca gcgacacaat tgtctgtgac 2340
agtaacagta cttgggatcc cccagttcca aagtgtctta aagtgtcgca tcaccatcac 2400
catcactaaa gatct 2415
```

<210> 25
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic lipid
      tail sequence

<400> 25
Gly Ser Ser Lys Ser Pro Ser Lys Lys Lys Lys Lys Pro Gly Asp
 1   5   10   15

<210> 26
<211> 14
<212> PRT
<213> Homo sapiens

<400> 26
Val Ser Thr Ser Ser Thr Thr Lys Pro Ala Ser Ser Ala Ser
 1   5   10

<210> 27
<211> 13
<212> PRT
<213> Homo sapiens

<400> 27
Gly Pro Arg Pro Thr Tyr Lys Pro Pro Val Ser Asn Pro
 1   5   10

<210> 28
<211> 16
<212> PRT
<213> Homo sapiens

<400> 28
Thr Tyr Leu Thr Asp Glu Thr His Arg Glu Val Lys Phe Thr Ser Leu
 1   5   10   15

<210> 29
<211> 23
<212> PRT
<213> Homo sapiens

<400> 29
Lys Ala Asp Gly Gly Ala Glu Tyr Ala Thr Tyr Gln Thr Lys Ser Thr
 1   5   10   15

Thr Pro Ala Glu Gln Arg Cys
                20

<210> 30
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      peptide

<400> 30
Ser Ser Pro Ala Pro Arg Cys Gly Ile
 1   5

<210> 31
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      6xHis tag

<400> 31
His His His His His His
  1   5

<210> 32
<211> 5
<212> PRT
<213> Homo sapiens

<400> 32
Ile Ile Pro Asn Lys
  1   5

<210> 33
<211> 5
<212> PRT
<213> Homo sapiens

<400> 33
Ser Ser Pro Asn Lys
  1   5

<210> 34
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      peptide

<400> 34
Gly Ile Leu Val
  1

<210> 35
<211> 5
<212> PRT
<213> Homo sapiens

<400> 35
Gly Ile Leu Gly His
  1   5